

**IN THE SPECIFICATION**

*Please amend the paragraph which extends from page 13 , line 10 to line 15, as follows:*

Example 3, which pertains to mats and facers of the present invention including clarifier sludge, is further described in United States Patent Application Serial Number 60/238,420 and simultaneously-filed United States Patent Application Serial Number 09/971,772 ~~==== (attorney docket 2334-195)~~, both entitled "Non-Woven Web Made With Untreated Clarifier Sludge", which are incorporated herein by reference in their entirety.

**IN THE CLAIMS**

Please cancel claims 1, 9, 16, 25, and 34 - 35 without prejudice or disclaimer.

Please amend claims 2 - 8, 10 -11, 15, 17, 19, 23 - 24, 26, 28, and 33 as follows:

1. {CANCELLED}

2. (CURRENTLY AMENDED) The product of claim 31, wherein the sizing agent is alkenyl succinic anhydride.

3. (CURRENTLY AMENDED) A non-woven web comprising ~~The product of claim 2;~~  
cellulose fiber;  
glass fiber, and  
a sizing agent which has a fast reaction rate with cellulose and which provides the mat with decreased liquid penetrability over time, wherein the sizing agent has a dry basis add-on rate of from about 0.15% to about 0.4%.

4. (CURRENTLY AMENDED) The product of claim 32, wherein the sizing agent has a dry basis add-on rate of from about 0.2% to about 0.3%.

5. (CURRENTLY AMENDED) The product of claim 31, wherein the sizing agent provides the mat with decreased liquid penetrability four weeks after mat production.

6. (CURRENTLY AMENDED) The product of claim 31, further comprising untreated clarifier sludge.

7. (CURRENTLY AMENDED) The product of claim 36, wherein the ~~sizing agent is alkenyl succinic anhydride~~ cellulose fiber is recycled cellulose fiber.

8. (CURRENTLY AMENDED) The product of claim ~~37~~, wherein the ~~sizing agent~~ has a ~~dry basis add-on rate of from about 0.15% to about 0.4%~~ glass fiber is recycled glass fiber.

9. {CANCELLED}

10. (CURRENTLY AMENDED) A non-woven web comprising:

[recycled] cellulose fiber;

[recycled] glass fiber, and

alkenyl succinic anhydride added as a sizing agent to provide the mat with decreased liquid penetrability over time, the alkenyl succinic anhydride having a dry basis add-on rate of from about 0.15% to about 0.4%.

11. (CURRENTLY AMENDED) The product of claim 10, wherein the ~~alkenyl succinic anhydride~~ has a ~~dry basis add-on rate of from about 0.15% to about 0.4%~~ cellulose fiber is recycled cellulose fiber.

12. (PREVIOUSLY AMENDED) The product of claim 10, wherein the alkenyl succinic anhydride has a dry basis add-on rate of from about 0.2% to about 0.3%.

13. (PREVIOUSLY AMENDED) The product of claim 10, wherein the alkenyl succinic anhydride provides the mat with decreased liquid penetrability four weeks after mat production.

14. (PREVIOUSLY AMENDED) The product of claim 10, further comprising untreated clarifier sludge.

15. (CURRENTLY AMENDED) The product of claim ~~1014~~, wherein the ~~sizing agent~~ has a ~~dry basis add-on rate of from about 0.15% to about 0.4%~~ glass fiber is recycled glass fiber.

16. {CANCELLED}

17. (CURRENTLY AMENDED) A method of forming a non-woven web, the method comprising:

making a mixture of [recycled] cellulose fiber and [recycled] glass fiber;

choosing a sizing agent to provide the mat with decreased liquid penetrability over time;

adding the a sizing agent to the mixture at a dry basis add-on rate of from about 0.15% to about 0.4%;

forming the mixture into a mat;

~~choosing the sizing agent to provides the mat with decreased liquid penetrability over time.~~

18. (ORIGINAL) The method of claim 17, wherein the sizing agent is alkenyl succinic anhydride.

19. (CURRENTLY AMENDED) The method of claim 17, further comprising ~~adding the sizing agent at a dry basis add-on rate of from about 0.15% to about 0.4%~~ making the mixture with recycled cellulose fiber.

20. (ORIGINAL) The method of claim 17, further comprising adding the sizing agent at a dry basis add-on rate of from about 0.2% to about 0.3%.

21. (ORIGINAL) The method of claim 17, wherein the sizing agent provides the mat with decreased liquid penetrability four weeks after mat production.

22. (ORIGINAL) The method of claim 17, further comprising adding untreated clarifier sludge to the mixture.

23. (CURRENTLY AMENDED) The method of claim 17 ~~22~~, wherein the sizing agent is alkenyl succinic anhydride.

24. (CURRENTLY AMENDED) The method of claim 17 22, further comprising ~~adding the sizing agent at a dry basis add-on rate of from about 0.15% to about 0.4%~~ making the mixture with recycled glass fiber.

25. {CURRENTLY AMENDED} The method of claim 17 22, further comprising ~~adding the sizing agent at a dry basis add-on rate of from about 0.2% to about 0.3%~~ freshly preparing a dispersion which includes the sizing agent prior to adding the sizing agent.

26. (CURRENTLY AMENDED) A rigid cellular foam board comprising:  
a first facer and a second facer;  
a rigid cellular foam formed between the first facer and the second facer;  
wherein at least one of the first facer and the second facer comprise:  
[recycled] cellulose fiber;  
[recycled] glass fiber, and  
a sizing agent which provides the facer with decreased liquid penetrability over time,  
the sizing agent having a dry basis add-on rate of from about 0.15% to about 0.4%.

27. (PREVIOUSLY AMENDED) The product of claim 26, wherein the sizing agent is alkenyl succinic anhydride.

28. (CURRENTLY AMENDED) The product of claim 26, wherein the cellulose fiber is recycled cellulose fiber ~~sizing agent has a dry basis add-on rate of from about 0.15% to about 0.4%.~~

29. (PREVIOUSLY AMENDED) The product of claim 26, wherein the sizing agent has a dry basis add-on rate of from about 0.2% to about 0.3%.

30. (PREVIOUSLY AMENDED) The product of claim 26, wherein the sizing agent provides the facer with decreased liquid penetrability four weeks after facer production.

31. (PREVIOUSLY AMENDED) The product of claim 26, wherein the foam is a polyisocyanurate foam.

32. (PREVIOUSLY AMENDED) The product of claim 26, wherein at least one of the first facer and the second facer further comprise untreated clarifier sludge.

33. (CURRENTLY AMENDED) The product of claim ~~26~~ 32, wherein the glass fiber is recycled glass fiber ~~sizing agent is alkenyl succinic anhydride.~~

34. {CANCELLED}

35. {CANCELLED}

### **REMARKS**

Reexamination of the captioned application is respectfully requested.

#### **A. SUMMARY OF THIS AMENDMENT**

By the current amendment, Applicants:

1. Editorially amend the specification to insert the serial number of an incorporated application.
2. Cancel claims 1, 9, 16, 25, and 34 - 35 without prejudice or disclaimer.
3. Amend claims 2 - 8, 10 - 11, 15, 17, 19, 23 - 24, 26, 28, and 33.
4. Respectfully traverse all prior art rejections.
5. Advise the Examiner of the simultaneous filing of a Petition to Extend

#### **B. THE AMENDMENTS TO THE CLAIMS**

Claim 3 has been rewritten as an independent claim by including selected limitations from original independent claim 1 and a "fast reaction rate with cellulose" clause supported, e.g., by the paragraph bridging pages 8 and 9 of the specification). Unlike original independent claim 1, amended independent claim 3 does not refer to recycled cellulose fiber or recycled glass fiber. Recycled cellulose fiber and recycled glass fiber are now the subject of amended dependent claims 7 and 8, respectively.

Amended independent claim 10 has been amended to include the "decreased liquid penetrability over time" language, and to specify that the alkenyl succinic anhydride has a dry basis add-on rate of from about 0.15% to about 0.4%. Neither amended independent claim, nor any other independent claim now pending, is restricted to the use of "recycled" cellulose or "recycled" glass fiber. Recycled cellulose fiber and recycled glass fiber are now the subject of amended dependent claims 11 and 15, respectively.

Independent method claim 17 has been amended to include choosing a sizing agent to provide the mat with decreased liquid penetrability over time; and adding the sizing agent to the mixture at a dry basis add-on rate of from about 0.15% to about 0.4%. Rather than being

in independent claim 17, recycled cellulose fiber and recycled glass fiber are now the subject of amended dependent claims 19 and 24, respectively.

Amended dependent claim 25 is directed to the step of freshly preparing a dispersion which includes the sizing agent prior to adding the sizing agent. The amendment to dependent claim 25 is supported, e.g., by the second full paragraph of page 9 of the specification.

Amended independent claim 26 now also omits the recycle language, but (like other independent claims) states that the sizing agent having a dry basis add-on rate of from about 0.15% to about 0.4%. The recycled cellulose fiber and recycled glass fiber are now the subject of amended dependent claims 28 and 33, respectively.

### C. THE PATENTABILITY OF THE CLAIMS

Claims 1-16 under 35 USC §102(b) as being anticipated by WO 97/16483 to Bondoc et al (see enumerated paragraph 3 of the office action). Claims 17-22 and 23-25 under 35 USC §103(a) as being unpatentable over WO 97/16483 to Bondoc et al. in view of certain alleged applicant admissions (see enumerated paragraphs 6 and 7 of the office action). All prior art rejections are respectfully traversed for at least the following reasons.

All pending independent claims require (1) that the sizing agent have a dry basis add-on rate of from about 0.15% to about 0.4%, and (2) that the sizing agent provide the mat with decreased liquid penetrability over time. Neither of these limitations are taught or suggested by WO 97/16483 to Bondoc et al (or US Patents 5,717,012 and 5,776,841, which issued on the same priority application as WO 97/16483 to Bondoc et al).

Contrary to the third enumerated paragraph of the Office Action, WO 97/16483 to Bondoc et al does not teach or suggest the claimed dry basis add-on rate of from about 0.15% to about 0.4%. Rather, WO 97/16483 to Bondoc et al requires a sizing agent in a range from 0.5 - 10 wt.% on a dry basis. In this regard, see the listing of product constituencies in the



Abstract, in claim 1, and in the summary on page 2 of WO 97/16483 to Bondoc et al, noting particularly the preamble on a dry basis.

Nowhere does WO 97/16483 to Bondoc et al provide any indication that choice of his sizing agent provides a mat with decreased liquid penetrability over time. In actuality, the discussion of sizing agent on page 10 of WO 97/16483 to Bondoc et al perhaps only incidentally lists alkenyl succinic anhydride as a possible sizing agent. There is nothing in WO 97/16483 to Bondoc et al from which one can deduce that Bondoc actually utilized alkenyl succinic anhydride, and certainly not in the add on range of Applicant's claim. Such being the case, Bondoc et al cannot teach or suggest selection of a sizing agent which provides a mat with decreased liquid penetrability over time.

In view of the foregoing and other reasons, the Examiner has ample bases for withdrawing all rejections and passing the captioned application to issue. Accordingly, a formal indication of allowance is earnestly solicited.

#### D. MISCELLANEOUS

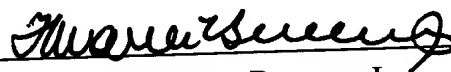
The Commissioner is authorized to charge the undersigned's deposit account #14-1140 in whatever amount is necessary for entry of these papers and the continued pendency of the captioned application.

Should the Examiner feel that an interview with the undersigned would facilitate allowance of this application, the Examiner is encouraged to contact the undersigned.

Respectfully submitted,  
NIXON & VANDERHYE P.C.

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By: \_\_\_\_\_



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